

Translation

PATENT COOPERATION TREATY

PCT/EP2003/003746



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference M/42257-PCT | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/EP2003/003746 | International filing date (day/month/year) 10 April 2003 (10.04.2003) | Priority date (day/month/year) 11 April 2002 (11.04.2002) |
| International Patent Classification (IPC) or national classification and IPC C08G 2/08 | | |
| Applicant BASF AKTIENGESELLSCHAFT | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 07 November 2003 (07.11.2003) | Date of completion of this report 13 April 2004 (13.04.2004) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/003746

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-17, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 1-9, filed with the letter of 10 March 2004 (10.03.2004)
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/03746

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|-------|-----|
| Novelty (N) | Claims | 1 - 9 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1 - 9 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1 - 9 | YES |
| | Claims | | NO |

2. Citations and explanations

1. Cited document

D1: US-A-5 089 536 (PALAZZOTTO MICHAEL C) 18
February 1992 (1992-02-18).

2. Novelty

The present application relates to a method for producing polyoxymethylene by bringing a formaldehyde source into contact with a catalyst having a central atom of group VIII and a cyclooctadiene ligand (formula I) (claim 1) or (Ir(III)CpCl₂Ir(III)CpCl)CF₃SO₃ (claim 9).

D1 discloses a method for producing polyoxymethylene, but does not disclose any catalysts with cyclooctadiene ligands or any binuclear iridium catalyst.

Consequently, the subject matter of claims 1-9 of the present application is novel.

3. Inventive step

D1 is regarded as the closest prior art.

The present application differs from the subject matter of D1 in that different catalysts are used.

The problem to be solved by the present application was that of providing a method for producing polyoxymethylene with a short induction time (see page 2, lines 20-25 of the description).

This problem was solved by using catalysts of formula I and by the binuclear iridium catalyst (see examples).

D1 does not suggest this solution.

Consequently, the subject matter of claims 1-9 involves an inventive step.